

Vocal and other peculiarities of Brown Nightjar *Caprimulgus binotatus*

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Un Engoulevent à deux taches *Caprimulgus binotatus* a été capturé au filet au Parc National de Nouabalé-Ndoki (Congo), en utilisant la repasse d'un chant d'engoulevent jusqu'ici non attribué. La voix (très inhabituelle pour un engoulevent africain) et certaines particularités morphologiques (notamment la présence de touffes de plumes au-dessus des oreilles et les tarses très larges et courts) suggèrent que cet engoulevent pourrait appartenir à son genre propre *Veles*. Outre l'Engoulevent de Bates *C. batesi*, il reste en Afrique Centrale une troisième espèce d'engoulevent forestier non encore identifiée.

Nouabalé-Ndoki NP, in extreme northern Congo (02°30'N, 16°30'E), contains over 3,800 km² of pristine forest and is explorable only on foot. A single vehicle track, 31 km-long, leads from Bomassa Camp (on the edge of the Sangha river) east to the park's boundary on the Ndoki river. FDL first visited the park in April 1996 and discovered a nightjar of uncertain identity holding territory near Ndoki Camp⁵; the voice, small size and habitat (semi-evergreen forest with relatively open canopy) excluded Bates's Nightjar *Caprimulgus batesi* (a large species of closed-canopy swamp or evergreen forest, with a loud whistled song⁶). It was at first assumed to be Brown Nightjar *C. binotatus*, the only other species known from the Lower Guinea forests, but whose song remains undescribed. However, the existence of yet another undescribed nightjar song taped recently by M. Gartshore and others in Ivory Coast and Ghana (also attributed to *C. binotatus* by process of elimination, as *binotatus* is the only forest nightjar collected from West Africa) prompted us to return to Ndoki for further investigation, as these birds could, in addition to *C. binotatus*, prove to be an undescribed species or the very rare Itombwe Nightjar *C. prigoginei*, known from a single specimen collected in the Itombwe Forest of, what was formerly, eastern Zaïre¹⁰.

During a brief survey of Lobéké Reserve in south-east Cameroon (13–25 April 1997), prior to our arrival at Ndoki, we found two nightjar species occurring sympatrically in semi-evergreen forest: one sang like the Ndoki bird (a dry staccato song) and the other like the West African recording (a series of spaced out, metallic *klion* notes). Obviously one of these two birds would almost certainly turn out to be *C. binotatus*, already known from south Cameroon and adjacent Dzanga-Ndoki NP in Central African Republic.

Most of the time in Nouabalé-Ndoki from 25 April–20 May 1997 was devoted to locating nightjar territories along the Bomassa to Ndoki track and trying to mist-net individuals, making use of tape playback.

One of the two species was trapped and we report here on the first live capture of *C. binotatus*, some peculiar plumage characters of the bird examined in the hand and the voice, all aspects of the species previously undescribed in the literature (see Ery *et al*).

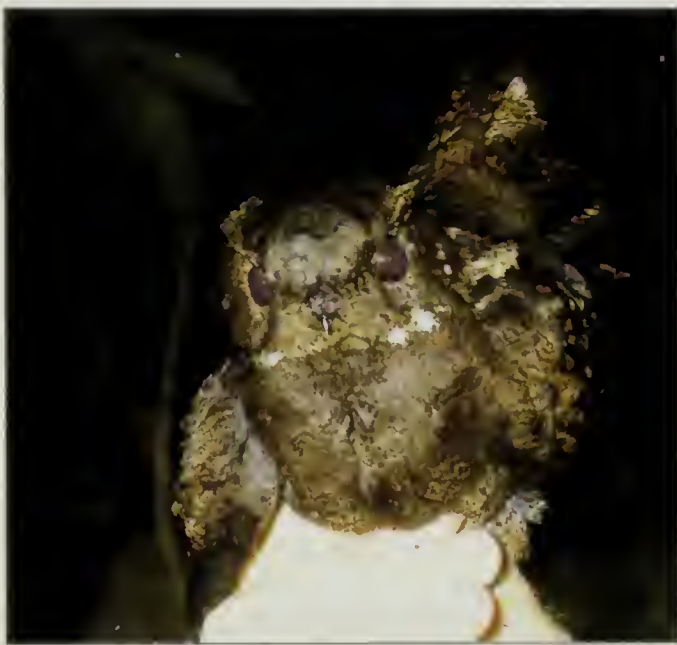
Methods and results

The first 6 km of the trail from Bomassa pass through secondary *Musanga* forest which appears unsuitable for most nocturnal species except African Wood Owl *Strix woodfordii*. The remaining 25 km pass through semi-evergreen rainforest, mostly with a relatively open (25–50%) canopy: this section was explored systematically, stopping at fixed distances to seek nightjars (provoked into song by tape playback) and owl species. The use of one of the project vehicles for this exercise permitted accurate measurement of distances (essential for relocating individual birds). Forest-dwelling nightjars usually sing perched in vegetation typically at elevations of 6–20 m, occasionally higher, and the voices of both species we were seeking are not readily audible beyond 150–200 m. Therefore, we paused every 250 m practising tape playback on either side of the vehicle, often walking up to 100 m along the track. Our limited field experience of forest nightjars suggests that, after calling briefly at dusk, birds often vacate the territory for one or more hours presumably when feeding activity peaks. It was therefore considered most productive to seek nightjars in the last few hours of darkness until dawn, ie from 02.00–05.20 hr local time. It was necessary to conduct eight nights fieldwork to cover the 25 km.

Ten nightjar territories were located, seven of *C. binotatus* and three of another species (the identity of which awaits confirmation). All were situated in forest with open or patchy canopy, and dense understorey—where Zingiberaceae and Marantaceae (especially the herbaceous creeper *Haumania*) were common. Nightjars were absent from a continuous stand of 5 km of relatively closed-canopy forest. It



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2



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Plates 1–3 Brown Nightjar *Caprimulgus binotatus*, Nouabalé-Ndoki NP, Congo, May 1997 (F. Dowsett-Lemaire)

seems likely that some territories were overlooked within open forest, as on one occasion no nightjars were found at a given locality during our first visit but an additional survey two hours later provoked a *C. binotatus* into song. The two species appear to have non-overlapping territories (although they do not react to each other's songs), and calling individuals were nowhere closer than 1 km. The minimum distance between two *C. binotatus* territories was 500 m but normally at least 750–1,000 m separated neighbouring calling birds.

Unlike savannah species, forest nightjars do not rest on roads. They feed in clearings and gaps between canopy trees, around tangles of lianas and sometimes over the Marantaceae understorey (typically 3–5 m high) and over forestry tracks. Only three nightjars occupied territories situated on either side of the track,

and 4m-high mist-nets were placed in two of these (one of each species).

During five nights of mist-netting, one *C. binotatus* was caught using tape playback on 16 May at 05.15 hr (5 mins before dawn). When first contacted on 1 May, at c03.00 hr, this bird was silent at first but responded to tape playback by 'dive-bombing' the observer holding the recorder, while calling in flight. It then perched, still singing, on the side of the road. Early in the evening of 2 May (18.10 hr), the bird sang (c12 notes) spontaneously on the roadside and after a short period of tape playback, crossed the track to sing on the other side before apparently leaving the territory. We set up the nets in the afternoon of 15 May; at dusk (18.20 hr), the bird sang only one note before leaving the territory. At 18.40 hr, almost certainly the same individual was found feeding over the track 200–300

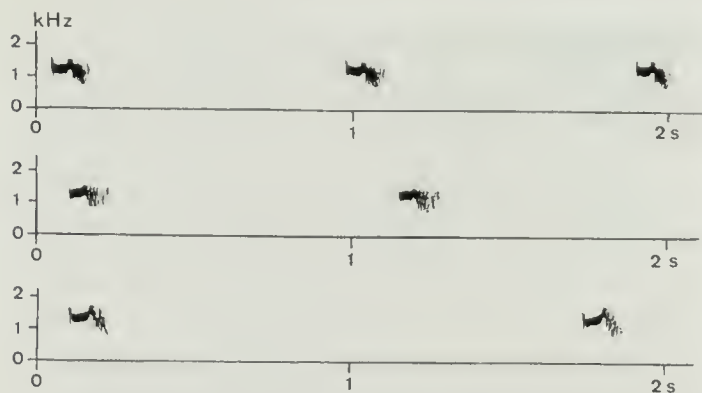


Fig. 1. Sonograms of the songs of Brown Nightjar *Caprimulgus binotatus*.

Top: from Lobéké Reserve, Cameroon.

Middle: from near Bomassa, Congo (both by F Dowsett-Lemaire).

Bottom: from Tiassalé, Ivory Coast (M Gartshore).

Cassette recordings were analysed with Sona-Graph Kay Electric Co, type 7029A, using wide band setting.

m further on and dive-bombed FDL while giving one note of song (although no tape was being played). Tape playback was tried near the nets on several occasions from 19.30–22.15 hr with no results. At 22.30 hr, the bird gave a distant answer (a single note) on two occasions, but without coming nearer. It was decided to try again in the last hour before dawn and at 04.30 hr the bird responded immediately, near one set of nets. FDL practised short snatches of tape playback every few minutes: the bird answered each time, flying overhead and singing (both in flight, then perched in nearby vegetation) at heights of 6–10 m. On one occasion, it was joined by a second bird and a chase ensued. At 05.10 hr, the bird sang from c50 m away and we thought that he had lost interest. However, two more song-notes played back brought the bird directly over FDL's head, calling, before flying into the lower net at a height of 1.6 m. The bird was measured (wing 150 mm, tail 97 mm) and was found to have progressed halfway through primary wing-moult (score of 28 out of a total of 50, ie it had replaced five of ten primaries and the sixth was partly regrown), with one rectrice growing back. It was impossible to ring it, as the tarsi were surprisingly thick and short—a 3-mm ring, normally suitable for African savannah nightjars, was too narrow, and the bigger 4.3 mm ring proved too long. The tarsal measurement of only 10–12 mm presented for this species by Bates¹ is consistently the shortest of all African nightjars⁷. Being exhausted after too many short nights, we unfortunately forgot to weigh it!

As far as we know, this is the first time a *C. binotatus* has been trapped alive and photographed in the hand. The bird showed two short 'horns' of stiff, pale feathers on either side of its broad forehead (Plates 2 and 3). This feature, unique among African nightjars, is apparently not reported in the literature⁷.

perhaps because it is not evident in museum skins (M Louette *in litt*). It is unclear whether this feature is visible in the photo on which the artist for Fry *et al* based a line drawing². In addition, the very broad gape (more like an Asiatic frogmouth) and peculiar metallic voice—rather reminiscent of an *Epomops* bat and quite unlike that of any of the churring or whistling songs of all other Afrotropical nightjars—could justify placing this species in a separate genus (the name *Veles Bangs* is available). This capture confirms that *C. binotatus* is indeed the originator of the spaced-out, metallic *kliou* notes. These are given spontaneously at a rate of about 1 sec, or slightly faster, when responding to tape playback (Fig 1). Prior to our recordings in Cameroon and Congo, there existed two recent tapes of the species from Ivory Coast and Ghana (C Chappuis *et al. in litt*), but the species had not been determined. This incidentally confirms the presence of *C. binotatus* in Ivory Coast, as no specimens are known from there⁴. An updated distribution of the species is mapped in Fig 2, taking into account the correction of published errors^{8,9}. The presently known distribution extends from Grassfield, Mt Nimba east to Yangambi on the Congo River. Another locality in former eastern Zaire is mapped by Colston⁴, but as details cannot now be traced (P R Colston *in litt*, M Louette *in litt*) this is separately identified by an open symbol.

It is worth noting that, unlike the other two forest nightjar species present in Congo (*C. batesi* and *C. sp.*), *C. binotatus* apparently does not produce a type of call-note distinct from the song. It is possible that the female also sings occasionally as, in Lobéké, two birds were found singing very close to each other, apparently without any aggressive interaction. In one of these, the song was less sustained and the series of notes shorter. Playback attracted one of these, which flew overhead after each of four playback experiments before singing from nearby vegetation.

In addition to the seven territories mentioned above and the pair found in Lobéké, all in dryland forest, another *C. binotatus* was heard at dusk on the

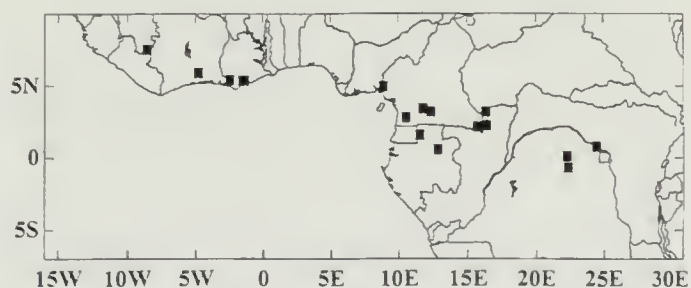


Fig. 2. Distribution of Brown Nightjar *Caprimulgus binotatus*. Filled squares: records confirmed by specimens, photos or tapes; open square: plot derived from Colston⁴, details of which cannot be traced. Map prepared using DMAP.

edge of a stream (at Wali in the Bomassa buffer zone), at the ecotone between monodominant *Gilbertiodendron dewevrei* forest and swamp forest. The latter had a fragmented canopy, with isolated trees or clumps of trees festooned with lianas. It seems that, for both *C. binotatus* and *C. sp.*, large clearings are important whereas *C. batesi* is confined to evergreen closed-canopy forest (in dryland or more often swamp forest: pers obs in Kouilou, Odzala, Ndoki in Congo and Lobéké in Cameroon).

Copies of FDL's tapes of *C. binotatus*, *C. sp.* and *C. batesi* are lodged with C Chappuis and the National Sound Archive (London).

Acknowledgements

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